

Project 123.1.1
Quality Improvement Leadership
Altai Krai
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Work Experience and Health Care Quality Expert review Analysis
on the Altai Krai Territory

Bureau of Licensing and Accreditation of the Medical and Pharmaceutical
Activities of the Altai Krai Administration Health Care Committee
City of Barnaul

The reasons for close attention to the problem of the quality of health care delivery are introduction of the mandatory and voluntary medical insurance, appearance of different types of property in the health care system, and formation of a medical services market. The provision of every patient with a set of diagnostic medical assistance which would lead to the optimal results of this patient' health status in conformity with the level of medical science must become a guarantee of health care quality, taking into account the age, seriousness of the basic disease, and character of comorbid pathology.

Provision of quality is necessary to the protection of patient's interests so that no harm would be done to him by incorrect and unnecessary treatment.

Health care quality management on the Altai Krai territory has been developed since 1985-86 when after the profound analysis of the morbidity, disability and mortality the Krai Health Care Committee determined the priority directions, and defined the goals and objectives of the Health Care system for the future. The initial step in the health care quality provision was Directive # 600 "Health Care Quality Management on the Altai Krai Territory".

This Directive determined the levels of health care delivery and its technology, performance requirements of medical staff, standards of diagnostics and treatment, and quality evaluation criteria for each stage. Technological standards of emergency assistance and planned medical care were worked out.

The necessity to exercise control and analyse the technological performance standard demanded specialists capable of checking health care quality. By the decision of the Board in 1990, medical facilities were given the right to introduce positions for quality experts, to create health care quality expert review ("expertise") departments. Thus the foundations for health care quality provisions were laid. The major objectives of the health facilities internal expert review was to provide health care quality in accordance with the adopted technologies, to exercise control over priority directions, performance and final results assessment in different services.

Introduction of the Law on Medical Insurance determined a new step in the provision of health care quality, i.e. external supervision of health care facilities by the Bureau of Accreditation and Licensing.

In 1992 the Bureau of Licensing and Accreditation of the activities in the field of health care together with health care quality expert review department was set up by the Krai Health Care Committee. The objectives of the Bureau were to provide accreditation and licensing

and also to develop uniform technologies of control over the internal as well as external quality expert review of health care delivery on the Altai Krai territory.

But if you don't have uniform standards it's impossible to assess, measure or check anything. The chief and leading specialists of the Krai Health Care Committee worked out and adopted medical-diagnostic process standards which turned out to be the next step in the health care quality provision.

During the transition period to medical insurance the Krai Health Care Committee entrusted the quality expert review department of the Bureau with the task of elaborating the uniform expert review technology on the Altai Krai territory. Four leading krai medical facilities together with the expert review bureau during 1993 developed the external expert review technology for inpatients and its correlation with internal expert review.

Since 1994 all medical facilities of the Altai Krai have worked according to the uniform technology of the internal and external expert review of health care quality.

Thus on the Altai Krai territory there was created a system of health care quality management and provision. The components of this system are:

- 1/. System of internal quality expert review in every medical facility headed by the doctor-expert in health care quality.
- 2/. System of external expert review which includes quality provision through accreditation and licensing, control over the patients' treatment quality on the part of health care authorities responsible for the nonworking population, and medical insurance organisations responsible for the working population through the quality expert review department.
- 3/. Expert review department of the Bureau as an organising and technological center.
- 4/. Quality provision through the refresher (continuing medical education) courses and training of the physician experts in interregional training center established by the decision of the Siberian Health Care Association Board in the city of Barnaul, located in the Bureau and the Altai State Medical University.
- 5/. Operation of the whole system to constantly provide and improve health care quality.

All the stages in the organisation of the quality providing system were observed.

- Creation of the standards.
- Establishing of the internal and external expert review organisational structures.
- Personnel training and development.
- Monitoring, analysis of the examinations made and improvement of all chains in quality management.

Krai medical facilities are on different levels in terms of health care quality expert review organisation. It depends on how heads of medical facilities are aware of the importance of quality provision.

Internal expert review of each medical facility has its specific features resulting in the conditions of work, but mainly it is based on the unified technology which helps to identify the deviation from the standards. The unified technology of a certain patient's treatment evaluation is an expert map comprising the estimation of the medical-diagnostic process in blocks A.B.C.D. - examination, diagnostics, treatment and continuity.

Being the leading methodologist in terms of organisation and introduction of the quality expert review the Bureau does not impose a unified system of expert review because we consider that each medical facility has its specific infrastructure. We teach unified approaches to expert review, unified technologies of expert review according to unified medical-diagnostic standards and also help medical facilities to analyse situations.

For the past two years the expert review department of the Bureau together with 12 Krai leading facilities worked out the technology of the internal and external expert review of inpatient treatment. 8500 medical records in 23 medical adults' and in 10 children's specialities have been reviewed by 40 physician experts who work on a contractual basis for the Bureau. To develop the expert review we invited chief specialists from the Krai and the Municipal Health Care Committees, leading highly-qualified doctors from the medical facilities. All the experts have the highest qualification categories, 9 - scientific degree, 4 of them are Doctors of Medical Sciences.

In order to make the expert review all expert cases have been determined: all lethal inpatient cases; deviations in the period of treatment from MES by more than 30% more or less than the standard period; and excessive cost of treatment from the standard by more than 50%. These cases for the expert review were selected with the help of the computer program from the presented hospital registers.

Evaluation of the treatment process is carried out according to the unified map containing 5 blocks ABCDE. It's necessary to assess accuracy of **examination, diagnosis, treatment and continuity in conformity with medical-economic standard**. Introduction of unit E--**accessibility to medical records**--was caused by the impossibility of reading the records of the doctors responsible for treatment, consultants, carelessness in behavior, filling the medical records themselves etc.

Expert review is made according to the paper expert map and then processed by the computer statistical program "Data Analysis". We have an opportunity to make the analysis of the deviations in blocks, by separate diagnostic categories, by departments, and by MPF (medical preventive facilities). In case the quality coefficient is lower than 0.9, outside experts and heads of the hospital department together analyse medical records trying to come to agreement about the coefficients. If there is a difference of opinion the medical record is considered by the Expert Council of the Bureau; its decision is final.

Analysis of the expert review showed that out of all expert map blocks the **examination block has the highest percentage of deviations and occurred in 18%** of the cases; deviations from the treatment standards occurred in 11% of the cases and 8% of deviations in diagnostics.

Physical and laboratory tests usually suffer during patients' examinations. The following typical for all defects occur during examinations:

- passiveness of the doctor while interviewing the patient; he doesn't identify the dynamics of the symptoms and previous treatment; women of fertile age are not asked about their gynecological history;
- inconsistency in collecting of the history;
- there are cases of incomplete physical examination: arterial blood pressure is not checked when a patient is first admitted and in dynamics, special examination such as: percussion, palpation and auscultation are not conducted in the case of lung, heart, vascular diseases etc.
- heads of the departments do not often examine the patients or do not do it on time;
- clinical reviews and consultations are seldom used;
- medical and diagnostic recommendations of the consultants are not always fulfilled;
- quite often patients are discharged with abnormal blood analysis (high SOE, low Hb, increased number of leucocytes), or with abnormal urinalysis - with leucocytes, proteins present in urine.
- changes in the analyses often are not explained by the doctors;
- often when antibiotics are prescribed there are no bacteriological cultures performed;
- there are also cases when incorrect diagnostic techniques were used, because clinical indications were not taken into account; and that caused wrong tactics in the treatment.

The main defects in the block of diagnostics are illogical interpretation of the examination results, i.e. it's directly connected with the level of the doctors' thinking;

While prescribing the treatment the goal of treatment and the expected result are not formulated. Sometimes the main reasons in the cases when the technology of treatment was not observed was the lack of effective antibiotics, inadequacy of the dose used to the clinical severity of the disease.

Often physiotherapeutical and non-traditional means of treatment are not used.

The doctors do not forecast "the quality of life" during the patient's admission to the hospital, i.e. the extent of the restoration of the sick organ or system functions during the treatment process and for the long-term period.

Two years of working experience in the system of payment for the patient cured [DRG-type payment] according to nosologies with the medical-diagnostic expert review showed positive changes in medical care. Outside control helps the doctors to become more disciplined, makes them identify and eliminate internal organisational problems in a timely fashion, make more efficient use of beds, be more rational while prescribing drugs and other types of treatment, to save the resources available.

The economic situation affects the quality in the delivery of health services.

Reduction in financing, increase of the wear and aging of medical and diagnostic equipment, insufficient provision with medications, growth of the acute and emergency cases in the structure of morbidity resulting from insufficient preventive activities - all these factors negatively affect the health care quality.

The doctors are not interested in the medical care quality improvement because their work is not decently paid.

Expert review technology of inpatient treatment quality

The doctor of any specialty always performs one and the same set of operations: collecting the data about the patient and about the state of his health during the whole period of his life, including data on previous tests, selection of diagnostic tests, examinations, diagnostics, treatment, forecast of the inpatient treatment outcome; choice of the subsequent observation stage and treatment with the long-term forecast of "the quality of life" (i.e. the extent to which the living functions of the sick organ or system could be restored). The expert reviews the documentation, paying attention to the whole complex of medical-diagnostic activities. The expert is obliged to take into account the possibility of making this or that step proceeding from the MPF resources, i.e. to know **the exact difference between "the doctor's performance quality" and "the health care quality"**. "Health care quality" means medical-diagnostic process organisation in the department and in the MPF as a whole: provision with medications, diagnostic and medical equipment, set of instruments, their accessibility in time (i.e. timely operations, no necessity to wait for your turn, too big amount of work for diagnostic services), effective and rational utilization of the resources available (drugs, equipment, reasons to stay in bed etc.). Expert review is made according to a unified expert map containing 4 blocks of basic medical activities A.B.C.D. Each block has different weight in the process of medical-diagnostic evaluation.

A - assessment of diagnostic procedures - 2.0

B - main diagnosis and other pathologic process characteristics assessment - 1.0

C - medical activities and procedures assessment - 6.5

D - continuity assessment - 0.5

The total score is 10.0. Each block is divided into subblocks in order to identify and evaluate the most significant activities and procedures.

Block A - 2.0. Diagnostics assessment.

A-1- 0.5. The volume and quality of examinations: claims collection, history, physical tests, consultations of specialists and examination made by the head of the department.

- complete - 0.5;

- partial or not timely or lack of the proper observation in dynamics according to the general state - 0.25;

- not fulfilled - 0.0;

The volume and the quality will be complete if:

The complaints “ reflect localization of the pain, its intensivity, radiation, the extent to which the sick organ or system functions is out of order and also additional complaints.

“History” - in the case of acute pathology the onset of the disease is indicated, its development in time, examination and prehospital treatment.

In case of chronic pathology - the beginning of the disease, symptoms development, treatment and its effectiveness, frequency of acute states and their duration.

“Objective examination”: review of systems, indicating the gravity of the general state and the profound description of the injured organ or system (percussion, palpation, auscultation).

Examination:

Timely examination: for emergency patients within 1-2 hours from the moment of admission.

For planned patients within 1-2 days; if necessary to carry out comprehensive examinations up to 3 days.

Consultative assistance. Is considered to be complete if the consultations are well-grounded, interpreted and used in order to lead the patient. Timely if consultative assistance is rendered for the group of the emergency patients with serious accompanying pathology within 3 hours from the moment of admission. With elective admissions within 1-2 days.

Examinations by the head of the department:

In case of emergency within the first night from the time of admission. With planned patients within first 1-3 nights. Current examinations by the head of the department during regular rounds once a week.

A-2-0.75. Volume and quality of laboratory tests:

- complete - 0.75
- not in full amount and not on time- 0.5
- redundant volume or control tests have not been fulfilled in view of the existing abnormalities - 0.25;
- not fulfilled - 0;

Examinations will be considered complete if they are optimal in the diagnosis, conducted on time and interpreted.

A - 3 - 0.75. The volume and quality of the instrumental tests:

- complete - 0.75
- not in full volume or not on time - 0.5
- redundant or without indications - 0.25
- not fulfilled or there were some complications during the tests - 0

Examinations will be full if they are well-grounded, adequate, made on time and interpreted.

Block B - 1.0. Evaluation of diagnosis and other characteristics of the pathologic process.

- made in the appropriate way, well-grounded - 1.0

- not fully formulated or not well-grounded, or accompanying diseases were not indicated, or arising complications were not mentioned - 0.75
- made but not on time - 0.5
- is not in compliance with clinical picture or there inconsistency with pathanatomic diagnosis with the main disease - 0.

Diagnosis is considered to be complete if it's made in conformity with the adopted classification when the phase, stages of the process, extent to which the functions are violated from the main and accompanying diseases and also developed complications.

Block C - 6,5. Medical operations evaluation.

C - 1- 2.0. Adequacy of treatment according to diagnosis:

- made in full volume and on time - 2.0
- medical therapy not in full volume (in the condition if the drugs are available in MPF); the treatment of the accompanying diseases was not conducted though it was necessary - 1.5
- the treatment was not started on time and operation was not performed on time , or the wrong tactics were used to perform the operation - 1.0
- redundant therapy - 0.75
- the treatment is not in conformity with the diagnosis - 0

The treatment will be considered to be fulfilled in full volume , if it starts on time ; therapy with the pathogenesis taken into account, with the optimal doses; with adequate control over treatment and necessary corrections during the process of treatment.

C - 2 - 2.5. The period of treatment::

- period of treatment adequate to diagnosis taking into account the accompanying pathology - 2.5
- long preoperative length-of-stay is not well-grounded or too long treatment is not well-grounded - 1.0
- too early and not well-grounded discharge - 0.5

C -3 - 2.0 The aim of the admitting and efficiency of treatment:

- the aim of admitting is well-grounded and achieved - 2.0
- complications have arisen as a result of the wrong treatment tactics - 0.75
- without changes or the state has become worse as a result of the wrong tactics of the patient's treatment - 0.5
- the aim of hospitalization is not achieved - 0

The aim of admission to the hospital is considered to be reasonable, e.g. necessary to relieve the pain syndrome or to prevent recurrence or to perform the planned operation or to admit according to the severity of disease (stomach bleeding etc.) The treatment is considered to be effective if the aim is achieved (bleeding is stopped. pain relieved, clinical remission of the chronic disease etc.)

Block D -0.5. Continuity:

- observed - 0.5
- no recommendations to the attending doctor - 0.25
- no recommendations to the patient - 0

The continuity is considered to be observed if the long-term prognosis is defined concerning the function restoration of the sick organ or system (in case of chronic disease) and

recommendations are given for the evaluation of the patient's working capacity; to the further supervision and treatment to the doctor herself/himself and to the patient. Having evaluated each block the expert is suggested that he should briefly write the comments to the defects indentified.

Faults:

1. Incomplete primary data collection.
2. Unreasonable deviation from the approved territorial technologies and standards.
3. Lack of necessary resources:
 - a. medicaments
 - b. means of diagnostics
 - c. set of instruments
 - d. specialist
4. Insufficient supervision of the department head over the medical-diagnostic process.
5. Insufficient professional training of the doctor.
6. Special gravity of the disease.

Consequences of the Faults:

1. Didn't influence the outcome and didn't cause the wasting of the resources.
2. Wasting of the resources (prolongation of the treatment period, examination made not on time or treatment which was also not started on time).
3. Complications arose which didn't influence the treatment outcome but caused wasting of resources - prolongation of the length-of-stay, additional medical therapy.
4. The defects that occurred caused complications and the state of the patient has become worse.

QUALITY EXPERT REVIEW OF INPATIENT TREATMENT

<u>A. Diagnostics evaluation:</u>	2.0
1. Volume and quality of examinations: collecting of claims, history, physical examinations, consultations of specialists and examination by the head of the department	0.5
- complete	0.5
- partial or not timely	
or lack of the appropriate observation	
according to the dynamics of the state	0.25
- not fulfilled	0
2. Volume and quality of laboratory tests	0.75
- complete	0.75
- not in full or	
on time	0.75
- redundant volume or	
the control analyses were not fulfilled considering the changes	0.25
- not fulfilled	0
3. Volume and quality of the instrumental examinations	0.75
- complete	0.75
- not in full or	
on time	0.5
- redundant volume or without indications	0.25
- not fulfilled or there were complications during examinations	0
<u>B. Evaluation of the completeness and reasonability of the diagnosis made</u>	1.0
Diagnosis is made in compliance with the adopted classifications (phase, stage of the process, concomitant diseases, complications)	
- is correct and reasonable	1.0
- diagnosed but not to the full extent or not reasonable	
or concomitant diseases were not considered or	
complications	0.75
- made out but not on time	0.5
- not in accordance with the clinics or there is no conformity with	
path/anatomic diagnosis	0
<u>C. Evaluation of medical and preventive activities</u>	6,5
1. Adequacy of treatment according to diagnosis	2.0
- conducted in full and	
on time	2.0
- not in full	
medication therapy (on condition the medicines are available in MPF)	
no treatment of the concomitant diseases though it was necessary	1.5
- the treatment was not started on time or operation was not	

performed on time or the incorrect tactics was used during the operation performance	1.0
- redundant therapy	0.75
- not in conformity with the diagnosis	0
2. Period of treatment	2.5
- adequate with diagnosis considering the accompanying pathology	2.5
- unreasonably long length-of-stay before operation or unreasonably long treatment	1.0
- early unreasonable discharge	0.5
3. Aim of admission or treatment effectiveness	2.0
- reasonable and was achieved	2.0
- complications arose as a result of the incorrect treatment tactics	0.75
- without changes or the aggravation of the state due to the incorrect treatment tactics	0.5
- not achieved	0
<u>D. Stage continuity</u>	0.5
- observed	0.5
- no recommendations to the doctor	0.25
- no recommendations to the patient	0

ERRORS:

1. Incomplete collecting of the initial data.
2. Unreasonable deviation from the territorial technologies and standards which are in use.
3. Lack of the necessary resources:
 - a) medications
 - b) means of diagnostics
 - c) instruments
 - d) specialist
4. Insufficient supervision of the medical-diagnostic process by the head of the department .
5. Insufficient professional training of the doctor.
6. Special gravity of the disease
7. Loss of information.

CONSEQUENCES OF ERRORS:

1. Did not affect the outcome and did not cause unreasonable resources consumption.
2. Unreasonable resources consumption (prolongation of the treatment period; not timely examination or treatment).
3. Complications that did not affect the outcome of treatment but caused unreasonable reasources consumption, prolongation of the length-of-stay, additional medication therapy.
4. Complications or aggravation of the state caused by the faults or death.